

Work Order ID 161256

Tuesday, May 09, 2017 3:09:36 PM

161256

Page 1

Item ID: D2933-1BL

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Saddle LH In, 206

Start Date: 5/9/2017 Start Qty: 10.00

Required Date: 5/24/2017 Req'd Qty: 10.00

Cust Item ID:

Customer:

Reference: SCHEDULED/C

Approvals: Process Plan: **DAS 21** Date: **MAY 09 2017** Tooling: **9-89**

Run Start *NR1*

QC: Date: SPC (Y/N):

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D2933	Rev C

100	HAAS CNC VERTICAL MACHINING #1	3.25				10	Ø		DAS 44 9-89 17-05-16
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100

HAAS 1

HAAS CNC vertical machine #1

Memo

4.29

Program part number and batch number.1-Inspect part number and batch number are programmed correctly.2-Machine Step No 1 of Folio and visually inspect as per dwg D2933 & attached Dimension Sheet 3-Machine Step No 2 of Folio and visually inspect as per

110	CONVENTIONAL MILLING MACHINE	0.00				10	Ø		DAS 44 9-89 17-05-16
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110

Mill Conv

Conventional Milling Machine

Memo

0.90

Machine Keyway and inspect per attached dimension sheet

120	QC1- Inspection performed by CMM	0.00				10	Ø		DAS 44 9-89 17-05-16
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120

QC

Quality Control

Memo

0.00

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Root Cause		FAULT CATEGORY																							
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OTHER : ☐																									

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Page 2

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC8- Inspect parts - second check	0.00							DAS 49
130						10	0		9-89
QC	Memo	0.20							17/05/21
Quality Control									
140	Chemical Conversion Coat per QSI005 4.1	0.00							
140						(X10)	0		2017/06/01
HandFinish	Memo	1.50							BEB
Hand Finishing									
150	Spray Painting per QSI005 4.2	0.00							
150									
SprayPaint	Memo	0.00							
Spray Painting	*** MASK ALL HOLES AS PER PAR16-484***								
	SPRAY PAINT BLUE								
	BATCH: _____								

150- autoancee

P10: 36840

JUN 19 2017

DAS
13
9-89

X10

151 rec'd + inspect

10 x SP17-6-22

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Page 3

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC14- Inspect Spray Paint	0.00							DAS 38 9-89
160									
QC	Memo	0.10							
Quality Control									JUN 23 2017
170	Identify as per dwg & Stock Location: <u>5190</u>	0.00							
170									
Packaging	Memo	0.10							
Packaging									JUN 27 2017
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	1.00							
Quality Control									JUN 27 2017

DAS
21
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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Root Cause		FAULT CATEGORY							
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER : ☐							
Misidentified ☐	Past Due ☐								

Picklist Print

Tuesday, May 09, 2017 3:09:40 PM

Page 1

Work Order ID: 161256

161256

Parent Item: D2933-1BL

***D2933-1BL ***

Parent Item Name: Saddle LH In, 206

Start Date: 5/9/2017

Required Date: 5/24/2017

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP: B00.06.26New DWG rev (mpp 2069)EC
IPP Rev:C As per Rev C 07-03-19 JLM
15.10.09 ADDED BL DD VERF:JLM
PAR16-484 DD VERF:JLM

IPP REV:D
IPP REV:E 16.01.22

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-001		Manufactured	No			100	Each	41.0000	1	10			
D6101-001													
Saddle Billet													

DAS
44
9-89

17-05-15

Location

Loc Qty

Loc Code

MAT042

41

153932

1

155195

20

159317

20

10

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

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Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER :						
Misidentified ☐	☐	Past Due ☐							

DART AEROSPACE LTD		Work Order:	161256
Description: 206 Saddle, Inboard, Left side		Part Number:	D2933-1
Inspection Dwg: D2933 Rev: C DSK: Rev:		Page 1 of 1	

FIRST ARTICLE INSPECTION DIMENSION SHEET

☒ First Article ☐ Prototype

Dim	Min	Max	Go/No Go Gauge	Record Actual Dimensions				
				1	2	3	4	5
A	0.100	0.140		.126	.125	.126	.125	.125
B	0.100	0.140		.126	.127	.126	.126	.126
C	0.100	0.140		.120	.120	.119	.120	.119
D	0.210	0.230		.227	.227	.226	.226	.226
E	1.245	1.255		1.250	1.250	1.250	1.250	1.250
F	1.245	1.255		1.250	1.250	1.250	1.250	1.250
G	2.495	2.505		2.500	2.500	2.500	2.500	2.500
H	0.510	0.515		.510	.510	.510	.510	.510
I	1.572	1.582		1.577	1.577	1.577	1.577	1.577
J	2.495	2.505		2.500	2.500	2.500	2.500	2.500
K	0.257	0.262		.257	.257	.257	.257	.257
L	0.312	0.317		.313	.313	.313	.313	.313
M	0.235	0.240		.238	.238	.238	.238	.238
N	0.100	0.140		.123	.123	.122	.122	.122
O	0.540	0.560		.550	.550	.551	.551	.550
P	0.490	0.510		.500	.499	.499	.499	.500
Q	3.715	3.725		3.720	3.720	3.720	3.720	3.720
R	2.470	2.510		2.495	2.495	2.495	2.495	2.495
S	0.240	0.270		.261	.261	.260	.260	.261
T	0.100	0.180		.135	.135	.135	.135	.135
U	1.625	1.635		1.630	1.630	1.630	1.630	1.630
V	1.362	1.372		1.367	1.367	1.367	1.367	1.367
W	0.316	0.321		.316	.316	.316	.316	.316
X	1.125	1.145		1.135	1.135	1.135	1.135	1.135
Y	1.565	1.585		1.575	1.575	1.575	1.575	1.575
Z	0.178	0.198		.188	.188	.188	.188	.188
AA								
AB								
AC								
AD								
AE								

DAS Accept/Reject

Measured by: 44	DAS	Date: 17-05-16
Audited by: 49	9-89	Date: 17/05/21
Prototype Approval: N/A		Date: N/A

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.12.12	Re-format; Added Dim. X-Y, DT8683, DT8686, DT8690 & DT8695 A/B	KJ/RF	
C	06.10.03	Removed DT8683, DT8686 & DT8690	KJ/JLM	
D	07.03.21	Revised per drawing revision C	KJ/JLM	
E	08.01.16	DT8695 A/B removed from dimension Y	KJ/EC/DD	

DART AEROSPACE LTD		Work Order:	161256
Description: 206 Saddle, Inboard, Left side		Part Number:	D2933-1
Inspection Dwg: D2933 Rev: C DSK: Rev:		Page 1 of 1	

FIRST ARTICLE INSPECTION DIMENSION SHEET

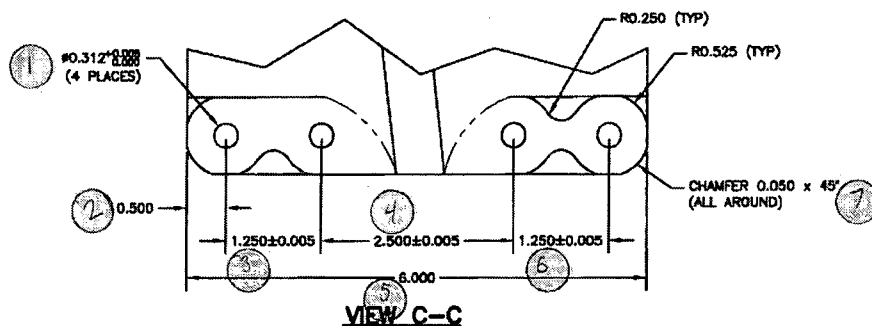
☒ **First Article**

 ☐ **Prototype**

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	6	7	8	9	10
A	0.100	0.140		.125	.126	.126	.126	.125
B	0.100	0.140		.127	.127	.127	.127	.127
C	0.100	0.140		.119	.120	.121	.119	.120
D	0.210	0.230		.226	.227	.226	.227	.227
E	1.245	1.255		1.250	1.250	1.250	1.250	1.250
F	1.245	1.255		1.250	1.250	1.250	1.250	1.250
G	2.495	2.505		2.500	2.500	2.500	2.500	2.500
H	0.510	0.515		.510	.510	.510	.510	.510
I	1.572	1.582		1.577	1.577	1.577	1.577	1.577
J	2.495	2.505		2.500	2.500	2.500	2.500	2.500
K	0.257	0.262		.257	.257	.257	.257	.257
L	0.312	0.317		.313	.313	.313	.313	.313
M	0.235	0.240		.238	.238	.238	.238	.238
N	0.100	0.140		.122	.122	.122	.123	.122
O	0.540	0.560		.550	.550	.550	.550	.550
P	0.490	0.510		.500	.500	.499	.499	.498
Q	3.715	3.725		3.720	3.720	3.720	3.720	3.720
R	2.470	2.510		2.495	2.495	2.495	2.495	2.495
S	0.240	0.270		.260	.261	.261	.261	.261
T	0.100	0.180		.135	.135	.135	.135	.135
U	1.625	1.635		1.630	1.630	1.630	1.630	1.630
V	1.362	1.372		1.367	1.367	1.367	1.367	1.367
W	0.316	0.321		.316	.316	.316	.316	.316
X	1.125	1.145		1.135	1.135	1.135	1.135	1.135
Y	1.565	1.585		1.575	1.575	1.575	1.575	1.575
Z	0.178	0.198		.188	.188	.188	.188	.188
AA								
AB								
AC								
AD								
AE								
DAS Accept/Reject								

Measured by:	44 9-09	DAS	Date:	17-05-17
Audited by:		49	Date:	17/05/21
Prototype Approval:		9-89 N/A	Date:	N/A

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.12.12	Re-format; Added Dim. X-Y, DT8683, DT8686, DT8690 & DT8695 A/B	KJ/RF	
C	06.10.03	Removed DT8683, DT8686 & DT8690	KJ/JLM	
D	07.03.21	Revised per drawing revision C	KJ/JLM	
E	08.01.16	DT8695 A/B removed from dimension Y	KJ/EC/DD	



D2933-1 LH SADDLE (SHOWN)

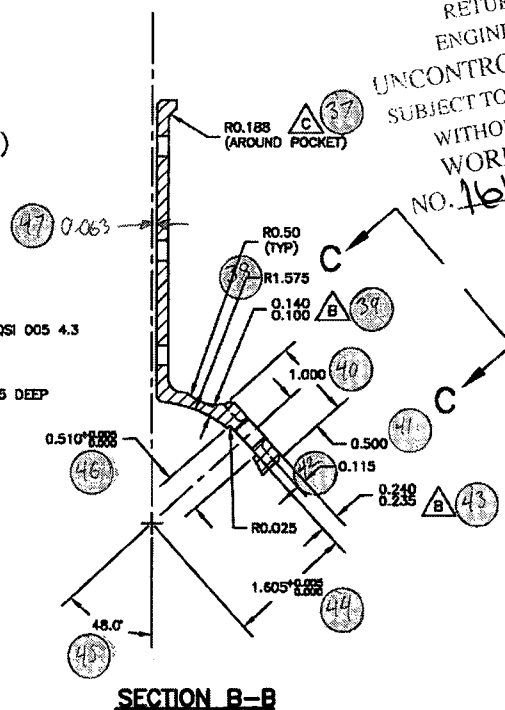
D2933-2 RH SADDLE (OPPOSITE)

NOTES:

- 1) MATERIAL: ALUMINUM 7075-T7351 (QQ-A-250/12)
(MAKE FROM D8101-001 SADDLE BILLET, 7075)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
- 3) BREAK ALL SHARP EDGES 0.010 TO 0.020
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) ENGRAVE PART AND BATCH NUMBER IN THIS AREA 0.010 TO 0.015 DEEP

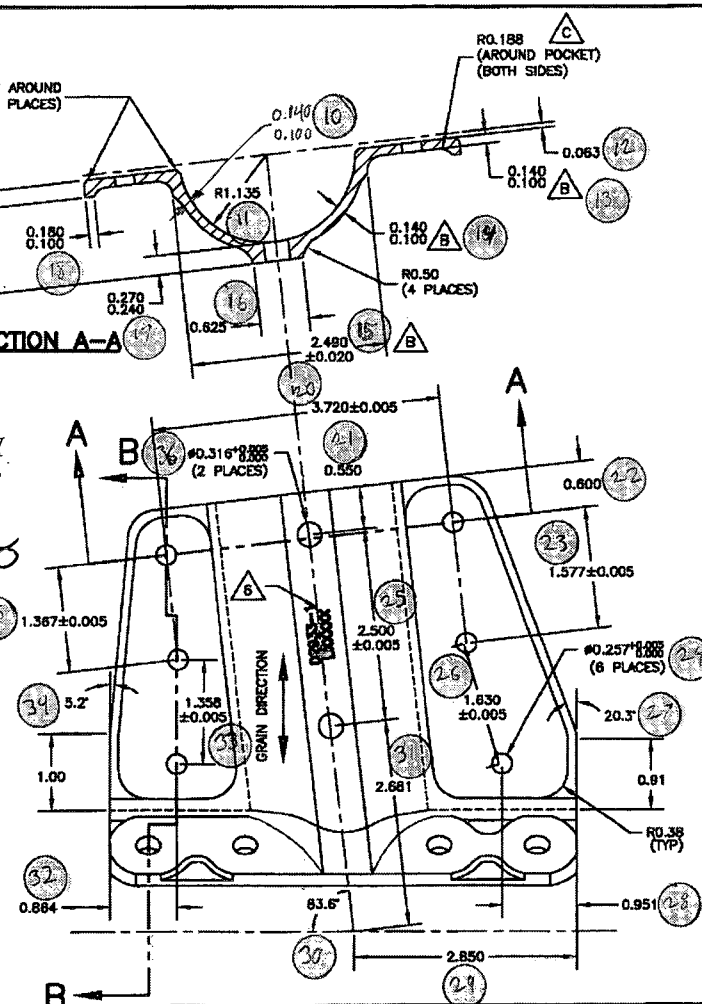
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07.02.12



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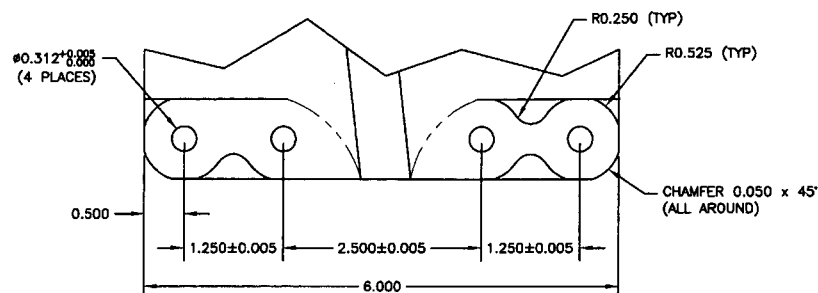
SECTION A-A



C	06.11.09	R0.188 WAS R0.30 TO R0.25
B	00.05.29	CHANGED GEOMETRY AND MATERIAL
A	99.10.29	NEW ISSUE
DESIGN	4	DRAWN BY CB
CHECKED	PH	APPROVED
DATE	06.11.09	TITLE SADDLE INSIDE
DRAWING NO.	D2933	REV. C
SHEET 1 OF 1		SCALE
		23

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DART DART AEROSPACE USA, INC.
BELLINGHAM, WA

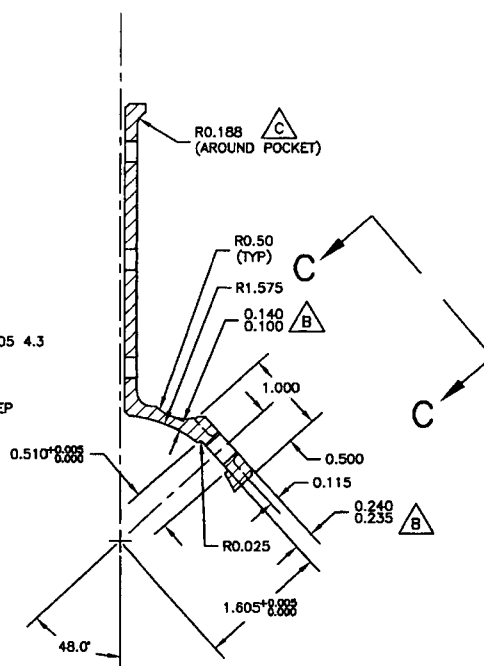


VIEW C-C

D2933-1 LH SADDLE (SHOWN)
D2933-2 RH SADDLE (OPPOSITE)

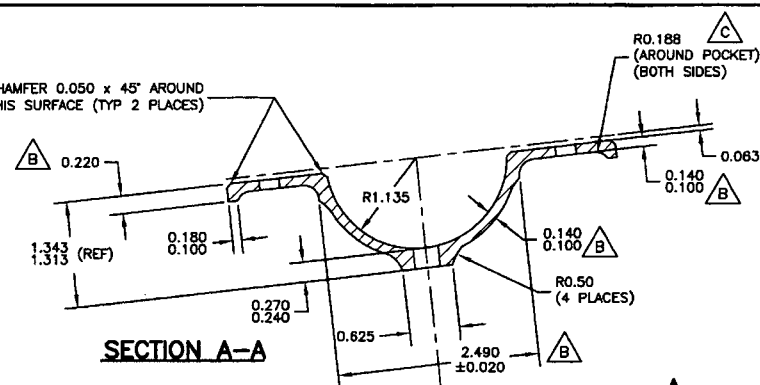
NOTES:

- 1) MATERIAL: ALUMINUM 7075-T7351 (QQ-A-250/12)
(MAKE FROM D6101-001 SADDLE BILLET, 7075)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
- 3) BREAK ALL SHARP EDGES 0.010 TO 0.020
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) ENGRAVE PART AND BATCH NUMBER IN THIS AREA 0.010 TO 0.015 DEEP

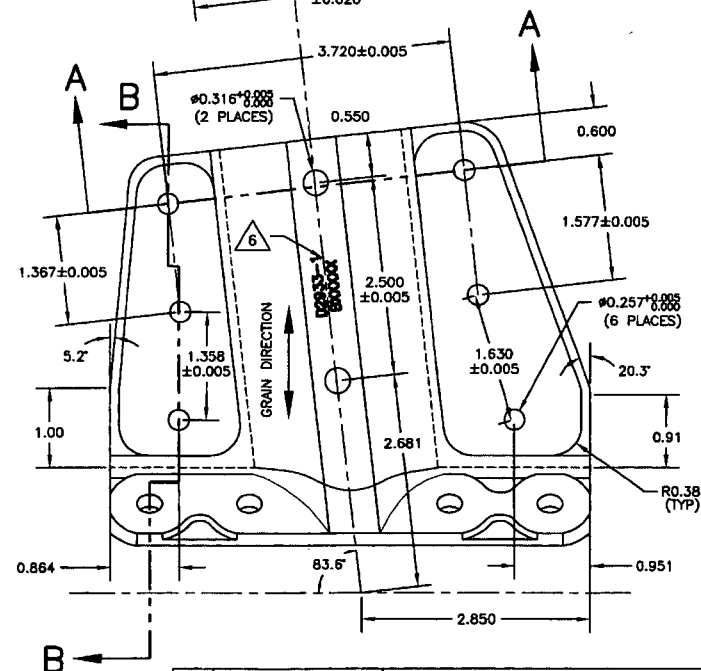


SECTION B-B

CHAMFER 0.050 x 45° AROUND
THIS SURFACE (TYP 2 PLACES)



SECTION A-A



C	06.11.09	R0.188 WAS R0.30 TO R0.25
B	00.05.29	CHANGED GEOMETRY AND MATERIAL
A	99.10.29	NEW ISSUE
DESIGN	CB	DART DART AEROSPACE USA, INC. BELLINGHAM, WA
CHECKED	PH	DRAWING NO. D2933
DATE	06.11.09	TITLE SADDLE INSIDE
		REV. C SHEET 1 OF 1 SCALE 2:3

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RELEASED

07-02-12



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO36740

Purchase Order Date 6/19/2017

PO Print Date 6/22/2017

Page Number 1 of 6

Order From :

VC-ATE001

Ship To : DART AEROSPACE LTD

ATELIER DEBOSELAGE
358 PRINCIPALE
CALUMET, QC J0V 1B0
CA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 819 242 5633

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

Ship To Contact

Ship To Phone

Ship Via:

Ship Acct:

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	161586	D2933-1BL SADDLE	6/29/2017 Yes 6/29/2017		12.00	\$0.00	\$0.00
Line Total:							\$0.00
2	161256	D2933-1BL SADDLE	6/29/2017 Yes 6/29/2017		10.00	\$0.00	\$0.00
Line Total:							\$0.00
3	161260	D2933-2BL SADDLE	6/29/2017 Yes 6/29/2017		8.00	\$0.00	\$0.00

PO Instructions: PRIMER DESOTO AND PPG Delfleet PAINT SUPPLY BY DART

Note:

6/22/2017